

Remarks/Arguments:

I. Status

The Office Action dated December 14, 2005 (the "Office Action") has been carefully reviewed. Claims 1, 12 and 17 have been amended; claim 18 has been canceled and claims 19-21 have been added. Accordingly, claims 1-17 and 19-21 are pending in this application. Reconsideration of this application is respectfully requested.

II. The Rejection of Claims 1-6, 8-11 and 17 under 102(e)

Claims 1-6, 8-11 and 17 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,447,448 B1 to Ishikawa et al. (hereinafter "Ishikawa"). The claims have been amended to more clearly distinguish the Applicants' invention over the disclosure of Ishikawa.

Discussion Regarding Patentability of Claim 1

1. Claim 1

Claim 1, as amended, recites:

A joint endoprosthesis comprising:
a body configured to replace a portion of a mammalian joint;
at least one sensor supported by a first component of said body, said sensor adapted to sense an ambient condition of the mammalian joint and to generate a condition signal indicative of the sensed condition; and
a transmission element supported by a second component of said body and operably connected to said sensor to receive said condition signal and operable to transmit a signal indicative of said condition signal.

Claim 1 thus recites an endoprosthesis with a sensor in one area of the endoprosthesis and a transmitter in a different area of the endoprosthesis.

2. Ishikawa Does Not Disclose Spaced Apart Components

As noted by the Examiner, Ishikawa discloses the use of a sensor with a prosthetic device. (Office Action at page 2). The device of Ishikawa is a “substantially spherical semiconductor.” (Ishikawa at Abstract). Thus, all of the components of the device of Ishikawa are in the same location of a prosthesis. Ishikawa does disclose the use of an “array” or “cluster” of balls. (Ishikawa at column 9, line 45-column 10, line 48 and FIGs. 8-11). Ishikawa teaches, however, that these clusters are connected together using connectors such as “solder bumps.” (Ishikawa at column 10, lines 9-13). Thus, the clusters or arrays are co-located on the prosthesis.

Claim 1 has been amended to recite that the sensor and the transmitter are supported by different components of an endoprosthesis. A sensor and transmitter that are joined together through solder bumps cannot be located in different components of an endoprosthesis.

Accordingly, the Applicants respectfully submit that claim 1, as amended, distinguishes over the prior art and the rejection of claim 1 has been overcome.

Discussion Regarding Patentability of Claims 2-6 and 8-11

Claims 2-6 and 8-11 have also been rejected as being anticipated by Ishikawa. Claims 2-6 and 8-11 depend from claim 1 and include all of the limitations of claim 1 as well as additional limitations. Therefore, for at least the same reasons set forth above with respect to claim 1, the Applicants respectfully submit that the rejection of claims 2-6 and 8-11 has been overcome.

Discussion Regarding Patentability of Claim 17

Claim 17 was also rejected as being anticipated by Ishikawa. Claim 17 is an independent claim which has been amended to recite “generating a human sensible warning signal in response to the determination that the temperature within the joint exceeds a predetermined setpoint.” Ishikawa does not disclose generation of a warning signal based upon a sensed temperature. Accordingly, the Applicants respectfully submit that claim 17, as amended, distinguishes over the prior art and the rejection of claim 17 has been overcome.

The Applicants note that claim 17, as amended, bears a resemblance to claim 18 which has been canceled and that the Examiner rejected claim 18 based upon a combination of Ishikawa in view of U.S. Patent No. 6,155,267 to Nelson (hereinafter “Nelson”). The previously proposed combination does not, however, arrive at the invention of claim 17. By way of example, there is no teaching, disclosure or suggestion in the cited references to generate an alarm based upon the temperature of a joint. Therefore, the Applicants respectfully submit that claim 17, as amended, is not obvious over Ishikawa in view of Nelson.

III. The Rejection of Claims 7 and 12-16 under 103(a) Should be Withdrawn

In the Office Action, claims 7 and 12-16 were rejected under 35 U.S.C. 103(a) as being obvious over Ishikawa in view of Nelson. The Applicants respectfully submit that the claims, as amended, are patentable over the prior art.

Discussion Regarding Patentability of Claim 7

The Examiner rejected claim 7 based primarily upon Ishikawa, modified to include an alarm function as taught by Nelson. Even if Ishikawa is modified to include an alarm function, such modification does not cure the deficiencies of Ishikawa with respect to the support of the sensor and transmitter by two different components of the endoprosthesis as discussed above with respect to claim 1. Thus, the proposed modification does not arrive at the invention of claim 7. Therefore, under MPEP § 2143.03, a *prima facie* case of obviousness has not been presented with respect to claim 7, as amended. Accordingly, the Applicants respectfully submit that the rejection of claim 7 has been overcome.

Discussion Regarding Patentability of Claim 12

1. Claim 12

Claim 12, as amended, recites:

A system for sensing a condition within a mammalian joint comprising:
an endoprosthesis including a body configured to replace a portion of the joint, the body including a wire channel;
a sensor supported by said body, said sensor adapted to sense an ambient condition of the mammalian joint and to generate a condition signal indicative of the sensed condition;
a transmitter connected to said sensor through said wire channel to receive said condition signal and operable to transmit a transmission signal outside the joint indicative of said condition signal;
a receiver disposed outside the joint for receiving said transmission signal; and
translation circuitry for translating said transmission signal to a human sensible signal.

Claim 12 thus recites an endoprosthesis with a sensor connected to a transmitter through a wire channel in a body of the prosthesis.

2. The Prior Art Does Not Disclose a Wire Channel

As discussed above, Ishikawa discloses connecting various balls together using solder bumps. Ishikawa does not teach, disclose or suggest that the solder bumps protrude through a portion of the prosthesis. Thus, Ishikawa fails to teach, suggest or disclose a sensor that is connected to a transmitter through a wire channel. Nelson likewise fails to teach, suggest or disclose a sensor that is connected to a transmitter through a wire channel. Therefore, even assuming the combination of Ishikawa with Nelson is proper, which the Applicants do not admit, the combination does not arrive at the invention of claim 12, as amended.

Accordingly, claim 12, as amended, distinguishes over the prior art. Therefore, the Applicants respectfully submit that the rejection of claim 12 has been overcome.

Discussion Regarding Patentability of Claims 13-16

Claims 13-16 have also been rejected as being obvious over Ishikawa in view of Nelson. Claims 13-16 depend from claim 12 and include all of the limitations of claim 12 as well as additional limitations. Therefore, for at least the same reasons set forth above with respect to claim 12, the Applicants respectfully submit that the rejection of claims 13-16 has been overcome.

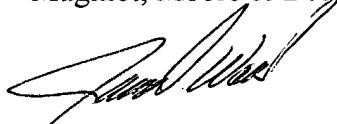
IV. Claims 19-21

Claims 19-21 have been added. These claims recite novel and non-obvious limitations. Accordingly, claims 19-21 are believed to be allowable over the prior art.

V. **Conclusion**

A prompt and favorable action on the merits is requested.

Respectfully Submitted,
Maginot, Moore & Beck

A handwritten signature in black ink, appearing to read "James D. Wood", is written over the printed name.

James D. Wood
Attorney for Applicants
Attorney Registration No. 43,285

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Maginot, Moore & Beck
Chase Tower
111 Monument Circle, Suite 3250
Indianapolis, IN 46204-5115
Telephone: (317) 638-2922